

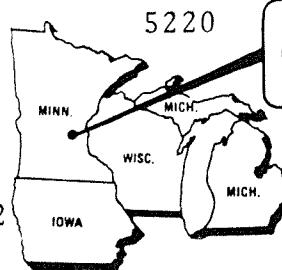
US DEPARTMENT OF AGRICULTURE
FOREST SERVICE



**Northeastern Area
State & Private Forestry**
FOREST PEST MANAGEMENT

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US FOREST SERVICE
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Spruce Budworm Defoliation on the
Superior National Forest - 1972

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Introduction

The current outbreak of spruce budworm, Choristoneura fumiferana (Clem.), was first detected in 1967 when 40,000 acres of gross area (includes non-host type) were defoliated. Defoliation has continued and reached its peak in 1971 when practically all spruce-fir type had at least light defoliation. Defoliation has declined in the northern half of the Forest, but increased and spread south and west into adjoining state and private lands south of the Forest boundary in 1972 (Map 1).

Methods

The aerial survey was conducted June 27-29, 1972. The flights were in an east-west direction, 1000 feet above the ground, and in parallel lines 6-12 miles apart, depending on host type and damage.

Areas of defoliation were sketch mapped using the following classes:

None to light - no visible defoliation observed from the air (light defoliation confirmed only by ground checks)

Moderate to severe - tree canopy showing obvious browning, with tops having complete foliage loss

Mortality - trees being grey in color, with no foliage remaining



Results

Moderate to severe defoliation by the spruce budworm is widely scattered (Map 1). Damage by the budworm in the northern half of the Forest appears to be on the decline when compared with past defoliation records and the marked decrease of egg-mass counts.

Damage in the southern half has spread to the south and west to cover the entire spruce-fir type including state and private lands outside the Forest boundary in T55N, R10, 11,12W, T56N, R15W, and T58N, R15W.

Extensive mortality of reproduction and pulpwood size balsam fir is occurring in most stands in T58 and 59N, R8,9,10,11W where 3-5 years of severe defoliation have occurred. In addition, mortality is present in the Pfeiffer Lake Campground area (T61N,R17W), the Windy Lake-Silver Island Lake area (T61N, R6W) and several scattered smaller areas.

Ground checks revealed several white spruce plantations (20-30 feet tall) with moderate to heavy damage, some for the second and third years.

T59N, R8W, S7 - Three years defoliation with extensive bud damage.

T60N, R10W, S20,21 - Three years defoliation and several trees dead along the gravel pit.

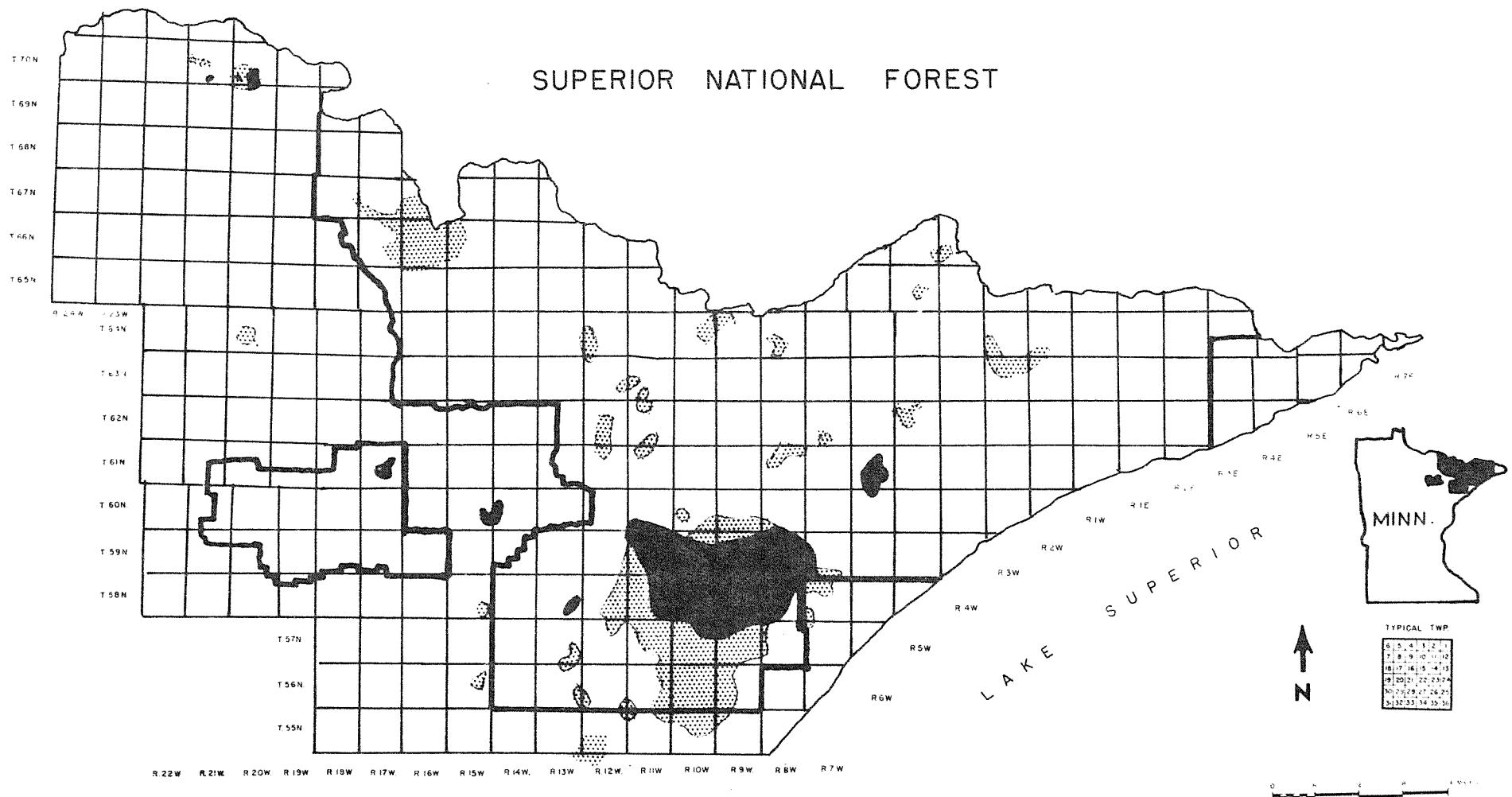
T56N, R10W, S31 - First year of defoliation on several trees along Hwy. 2.

T57N, R10W, S6 - first year of defoliation with north half of plantation having moderate damage.

Conclusions

The 1972 defoliation has declined from 2 million gross acres in 1971 to 1.5 million gross acres in 1972. Defoliation is expected to continue in 1973.

SUPERIOR NATIONAL FOREST



Map 1. Spruce Budworm Defoliation on the Superior National Forest - 1972

Moderate to Severe
 Mortality

